

EVALUATION OF ORAL HEALTH RELATED QUALITY OF LIFE IN PATIENTS ATTENDING ENDODONTIC DEPARTMENT IN DENTAL HOSPITAL, A CROSS SECTIONAL STUDY

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ABSTRACT

Objective: The main objective of this study was to evaluate the oral hygiene related quality of life in patients attending endodontic department and to access the relation of age and gender with Oral Health Related Quality Of Life.

Materials and Methods: A cross sectional study based on Oral Health Related Quality Of Life was done on patients attending endodontic department in a private dental hospital during the month of May 2018. Convenient sampling technique was used. All the patients attending endodontic department for Root Canal Treatment aged between 16-60 were included in the study. Any patient attending the department for re-RCT and medically compromised were excluded from the study. The OHIP 14 questionnaire was used, which is divided into different conceptual dimensions i.e. functional dimension, physical pain, psychological pain, physical discomfort, psychological discomfort, physical disability, social disability and handicap. Spss ver20 was used for analysis and p value of ± 0.05 was considered significant.

Results: A total of 100 participants were included in the study. Out of which 42(42%) were male and 58(58%) were females. The mean age of the participants was 32.34 years. The mean OHIP score of this study was 21.95, whereas the minimum value was recorded as 1 and maximum value was recorded as 54. None of the participants showed OHIP score of zero. 24(24%) of the participants felt tense, 21% participants had painful aching while 20 (20%) reported to be self conscious due to problem with their teeth. 7(7%) reported that very often they have taste worsening and only 10(10%) had trouble pronouncing words. Chi square between Gender of subject and trouble pronouncing any words showed a highly significant result (p -value= 0.058) A highly significant relationship was observed between both items of physical disability and Gender of subject (p -value 0.037 and 0.022).

Conclusion: All the patients attending endodontic department were unsatisfied with their OHRQOL up to some extent. Patients experienced psychological discomfort and disability along with physical pain which in turn leads to compromised quality of life.

Keywords: OHRQOL, Endodontics, OHIP.

INTRODUCTION

OHRQOL is a relatively new concept (1980) in which the WHO definition of health as “complete state of physical, mental and social well being not merely the absence of disease” is addressed.¹

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OHRQOL is a multidimensional and multi-factorial concept in which the main focus is on the people's comfort while they are eating, speaking, talking and having social interactions. Similarly their self esteem and satisfaction with the provided care is assessed and evaluated. Oral health related quality of life is associated with physical or functional factor, social factor, psychological factor, and experience of pain and discomfort.¹ Psychological factor include Self Esteem, Past Experiences and Appearance. The physical or functional factors include Mastication, Speech, and Swallowing. The Social factors include Intimacy and Communication. Whereas experience of Pain and Discomfort may be acute or chronic.

According to OHRQOL people assess their quality of life comparing with their experiences and expectations.¹

The ultimate goal of dental care is to provide good oral health care. This ultimately improves self esteem, encourage social interactions and relieve chronic stress and depression and save great deal of expenses as well. Also vital functions such as eating, swallowing, speaking, breathing, food selection are improved. Similarly daily routine activities such as school work, office and family interactions are affected.¹ The clinical indicators such as dental caries and periodontal disease status are not significant to assess the oral health of individual as declared by WHO.² These (dmft, ohi etc) identify the magnitude of the disease but does not identify the impact of this magnitude on individual's daily life and general health.^{2,4} OHRQOL identifies this impact in terms of physical, social, psychological and experience of pain. It also helps us to identify and prioritize oral health problems. Also it will help with screening and decision making in clinical settings. Better communication will help improve monitoring and evaluation.^{1,2}

Patients visiting endodontic department are usually in pain. Endodontic pain may vary in severity and source from pulpal to periapical.¹² Pulpitis pain is considered as one of severe pains and it causes discomfort at night. Pain and cost are two of the factors which identify patient satisfaction with endodontic treatment.¹² Patients usually have a fear/anxiety related to endodontic treatment (RCT).¹⁹ OHRQOL is a useful tool to help identify the quality of treatments provided to the patients and level of

patient satisfaction.

The most widely used method for assessment of OHRQOL is oral health impact profile (OHIP-14) developed by Blade and Spensor.⁶ This short form is tested to be appropriate for clinical practice studies.⁶

The main objective of this study was to evaluate the oral hygiene related quality of life in patients attending endodontic department and to assess the relation of age and gender with OHRQOL.

MATERIALS AND METHODS

A Cross sectional study was conducted in the Endodontic department of Sardar Begum Dental College in the month of May 2018. A total of 326 patients visited the department in the whole month. Using convenient sampling technique a total of 100 patients were recruited in the study who fulfilled the inclusion criteria. Inclusion criteria was that all the patients attending endodontic department for first visit of RCT between age 16 and 60, who were willing to participate were included in the study. All patients visiting endodontic department for re-RCT and medically compromised patients were excluded from the study. Approval from the hospital ethical committee was taken prior to the study. Patients were selected according to the inclusion criteria. The purpose and objectives of the study were explained to the participants. Informed consent was taken before the start of the study. The short form of the well structured questionnaire of OHIP-14 was used for assessment. The questions in this are divided into different conceptual dimensions sections (TABLE 1) The 14 items are organized into seven dimensions, namely, functional limitation, physical pain, psychological discomfort, physical disability, psychological disability, social disability, and handicap. The questionnaire was scored from 0 to 4 ranging from 0=never to 4=very often. A high score represented a more impaired OHRQOL, and a low score represented a better OHRQOL. A pilot study was conducted before the start of the study to weigh the reliability of the questionnaire. SPSS ver 20 was used for data analysis.

RESULTS

A total of 100 participants were recruited in the study. Out of which 42 were male and 58 were females (Figure 1). The mean age of the participants was 32.34 years (min 16-max 60 years).

The mean OHIP score of this study was 21.95, whereas the minimum value was recorded as 1 and maximum value was recorded as 54. None of the participants showed OHIP score of zero. The total distribution of OHIP scores is shown in Figure 2.

The responses of the participants to OHIP 14 items are given in Table 2. The maximum mean value is given from the domain of physical pain and, psychological discomfort that is 2.04 and 1.98 respectively.

The results of this study showed that 24(24%) of participants complained that they felt tense because of problem with their teeth while 21 (21%) participants very often had painful aching. 20(20%) reported very often to be self conscious due to problem with their teeth. Similarly only 7% reported that very often they have taste worsening and only 10(10%) had trouble pronouncing words.

The functional limitation dimension was assessed and relationship with age and gender was observed. The chi square between age and both items of functional limitation gave an insignificant result with p-value=0.286 and 0.213 respectively.

The chi square between Gender of subject and trouble pronouncing any words showed a highly significant (p-value= 0.073). Whereas the chi-square test between Gender of subject and worsening of sense of taste has showed an insignificant result with p-value =0.111.

Physical pain was assessed with two items in the questionnaire. There was an insignificant relationship between age and OHRQOL with p value 0.178 and 0.261. Insignificant results were observed between Gender of subject and painful aching with p-value of 0.442). In the psychological discomfort dimension an insignificant relationship was found between gender and both items of psychological discomfort with p value 0.679 and 0.546. A highly significant relationship was observed between both items of physical disability and Gender of subject. Both the items i.e diet been unsatisfactory and interruption of meals showed a highly significant p-value 0.037 and 0.022, respectively.

Psychological disability was assessed with two items. The results showed that Gender of subject and difficulty to relax because of problems with teeth, mouth or dentures gave highly significant relation-

ship with p value 0.004 (Table 5). Unlikely Gender of subject and embarrassment because of problems with teeth, mouth or dentures gave an insignificant relationship (p value 0.321).

Social disability was assessed by two items. Chi square between age and gender showed a highly significant relationship with one of the items i.e. bit irritable with other people (P value 0.007 and 0.099 respectively) (Table 6, 7). However the second item with difficulty doing usual jobs because of problems with teeth, mouth or dentures showed insignificant relation with both age and gender (p value = 0.163 and 0.237) (table 8)

Dimension of handicap was assessed with two items. Correlation with age and gender showed that both have a highly insignificant relation with them. With age p value= 0.495 and 0.288 p respectively and with gender p value =0.789 and p value =0.468 respectively.

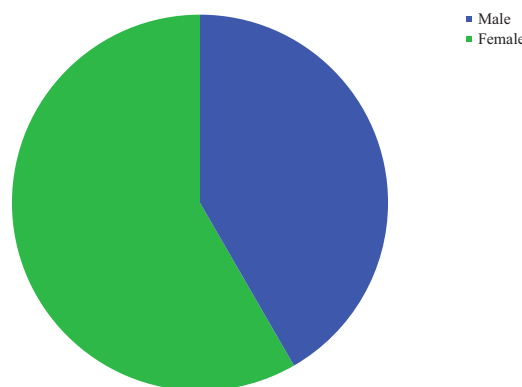


Figure 1: Gender Wise Disibution of Subjects

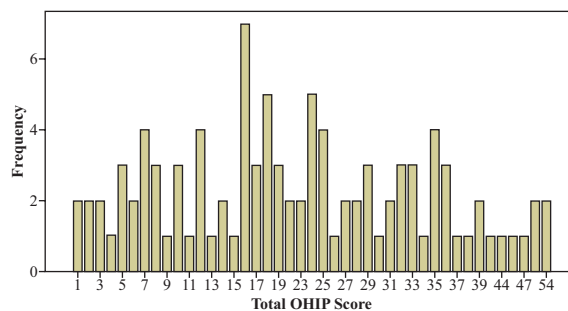


Figure 2: Total Ohip Scores

Table 1: Conceptual dimensions and quality of life items included in the instrument

Conceptual Dimension	Item
Functional limitation	1. Have you had trouble pronouncing words because of your teeth and mouth?
	2. Have you felt that your sense of taste has worsened because of your teeth or mouth?
Physical pain	3. Have you had painful aching in your mouth?
	4. Have you found it uncomfortable to eat any foods because of your teeth or mouth?
Psychological discomfort	5. Have you been self-conscious because of your teeth or mouth?
	6. Have you felt tense because of your teeth or mouth?
Physical disability	7. Has your diet been unsatisfactory because of your teeth or mouth?
	8. Have you had to interrupt meals because of your teeth or mouth?
Psychological disability	9. Have you found it difficult to relax because of your teeth or mouth?
	10. Have you been embarrassed because of your teeth or mouth?
Social disability	11. Have you been irritable with other people because of your teeth or mouth?
	12. Have you had difficulty doing your usual jobs because of problems with your teeth or mouth?
Handicap	13. Have you felt that life in general was less satisfying because of your teeth or mouth?
	14. Have you been totally unable to function because of your teeth or mouth?

Table 2: Responses of Participants to Ohip Questionare

ORAL HEALTH RELATED QUALITY OF LIFE	Never	Hardly ever	Occasionally	Fairly often	Very often	Mean	Standard deviation(SD)
1. Have you had trouble pronouncing an words because of problem with your teeth, mouth or dentures?	54	20	09	07	10	0.99	1.352
2. Have you felt that sense of taste has worsened because of problems with your teeth?	38	20	23	12	07	1.30	1.283
3. Have you had painful aching in your mouth?	12	27	27	13	21	2.04	1.317
4. Have you found it uncomfortable to eat any foods because of problems with your teeth?	19	17	28	21	15	1.96	1.325
5. Have you been self-conscious because of your teeth, mouth or dentures?	46	09	13	12	20	1.51	1.624
6. Have you felt tense because of problems with your teeth, mouth or dentures?	24	16	22	14	24	1.98	1.624
7. Has your diet been unsatisfactory because of problems with your teeth, mouth or dentures?	21	26	19	19	15	1.81	1.368
8. Have you had to interrupt meals because of problems with your teeth, mouth or dentures?	23	20	23	22	12	1.80	1.341
9. Have you found it difficult to relax because of problems with your teeth, mouth or dentures?	32	18	17	17	16	1.67	1.477
10. Have you been a bit embarrassment because of problems with your teeth, mouth or dentures?	58	07	16	08	11	1.07	1.437
11. Have you been bit irritable with other people because of problems with your teeth, mouth or dentures?	38	21	10	19	12	1.46	1.459
12. Have you had difficulty doing your usual jobs because of problems with your teeth, mouth or dentures?	41	18	17	12	12	1.36	1.425
13. Have you felt that life in general was less satisfying because of problems with your teeth, mouth or dentures?	36	16	14	17	17	1.63	1.529
14. Have you been totally unable to function because of problems with your teeth, mouth or dentures?	45	21	11	07	16	1.28	1.491

**Table 3: Gender of subject * Have you had trouble pronouncing any words because of problem with your teeth, mouth or dentures?
Chi-Square Tests**

	Value	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.572a	.073
Likelihood Ratio	8.763	.067
Linear-by-Linear Association	.001	.981
N of Valid Cases	100	

a. 5 cells (50.0%) have expected count less than 5. The minimum expected count is 2.94.

**Table 4: Gender of subject * Have you found it uncomfortable to eat any foods because of problems with your teeth?
Chi-Square Tests**

	Value	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.858a	.028
Likelihood Ratio	12.762	.012
Linear-by-Linear Association	4.794	.029
N of Valid Cases	100	

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.30.

**Table 5: Gender of subject * Have you found it difficult to relax because of problems with your teeth, mouth or dentures?
Chi-Square Tests**

	Value	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.337a	.004
Likelihood Ratio	16.437	.002
Linear-by-Linear Association	5.525	.019
N of Valid Cases	100	

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.72.

DISCUSSION

The main objective of this study was to evaluate the oral hygiene related quality of life in patients attending endodontic department and to access the relation of age and gender with OHRQOL. The results of this study showed a significant contribution of the impact of oral health on health related quality of life.

Psychological discomfort and physical pain showed the highest score among participants of this

**Table 6: Gender of subject * Have you been bit irritable with other people because of problems with your teeth, mouth or dentures?
Chi-Square Tests**

	Value	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.799a	.099
Likelihood Ratio	7.960	.093
Linear-by-Linear Association	4.524	.033
N of Valid Cases	100	

a. 1 cells (10.0%) have expected count less than 5. The minimum expected count is 4.20.

**Table 7: Age of subject * Have you been bit irritable with other people because of problems with your teeth, mouth or dentures?
Chi-Square Tests**

	Value	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.893E2a	.007
Likelihood Ratio	165.257	.108
Linear-by-Linear Association	5.072	.024
N of Valid Cases	100	

a. 185 cells (100.0%) have expected count less than 5. The minimum expected count is .10.

**Table 8: Age of subject * Have you had difficulty doing your usual jobs because of problems with your teeth, mouth or dentures?
Chi-Square Tests**

	Value	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.558E2a	.237
Likelihood Ratio	146.494	.426
Linear-by-Linear Association	1.956	.162
N of Valid Cases	100	

a. 185 cells (100.0%) have expected count less than 5. The minimum expected count is .12.

study (24% and 21%) which is also evident from other studies done in the same area.^{9,10,19} This shows that the patients attending endodontic department are going through some psychological trauma. The results from this study reported taste worsening only in 7 patients, whereas the studies done on diabetic patients showed sense of taste worsening as the most frequent complaint.^{5,15} Physical pain is also reported in 21 patients in this study which is also the most

frequent complaint of cancer patients^{11,21} and in elderly patients.^{18,20} Handicap domain is reported to be most frequently prevalent impact in patients having dentine sensitivity.⁶

Amongst the demographic variables included in the model, only age was a significant indicator, i.e., the health-related quality of life is worse with increasing age. Similar results were found in published research.^{3,10,13,17} But a study done in Nigeria on dentine hypersensitivity showed results no improvement in OHRQOL with increasing age.⁶ These results can be justified by greater impact of oral and systemic diseases in elderly individuals.

In this study only patients attending the endodontic department were included which gave high score for OHRQOL questionnaire but we need to compare the results with general population as similar results were given by another study done on dentine hypersensitivity⁶ but when compared with general population the results were different⁶. Similarly the results from before treatment and after treatment showed major noticeable changes as evident from different studies,^{6,14,19} the reason being satisfaction from treatment.

From the results of this study it is evident that overall there is no difference in OHIP 14 scores in both genders this is supported by data from different studies.⁶ But some of the studies come in contrast to this as they report; female patients have higher scores for OHIP 14 as compared to males¹⁴ because of females being more sensitive.

This gives a clue to suggest promote the concept of health-related quality of life in research. This information reveals the importance of oral health to general health of any individuals. Therefore, health professionals need to give special attention to oral health of individuals at community level. The participants included in this study were all patients who required dental care, which means that they had some impairment/dissatisfaction with their dental health. Dental patients potentially have worst dental clinical conditions, with more impact of oral health on general health. Therefore, further studies are required to verify the impact caused by oral problems in patients.

CONCLUSION

OHRQOL should be considered as the basis for planning any oral health care program and it should

be considered as one of the important component of the Global oral health programs. With the results of this study, relevant information can be provided to healthcare professionals, on the impacts caused by oral problems in health-related quality of life for the improvement of the available facilities and future planning. Preventive strategies and extensive treatments plans can be made. The focus on only solving oral problems, can be changed considering the impact of oral health on the overall health of individuals at community level.

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